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Approaches to university management, governance and strategy: systematic literature review in the 21st century

Mosquera-Guerrero, Andrea *
Meliá-Martí, Elena**
Romero-Torres, Efrén***

Abstract

The university is a key actor in the creation of knowledge that must respond to global transformations by meeting the demands of different interest groups, which has led to its management becoming a complex activity. The aim of this paper is to present the trends in university governance, strategy and management through the review of the Clarivate-Web of Science (WOS) and Scopus databases with the support of Vosviewer software. The results have made it possible to identify three perspectives: a) governance and leadership models, b) student body in university governance, quality of service and student entrepreneurship, and c) technology in higher education. For its part, the United Kingdom stands out as the country with the highest scientific production in this area. Finally, the study allows us to conclude that the changes that university management systems have undergone and the relevance that elements such as ICTs, the relationship with business, peer review processes and student participation have acquired within it, reflecting the most relevant factors of the evolution of governance systems in connection with the new dynamics that will guide us towards an entrepreneurial university.

Keywords: governance; strategy; management; students; technology.

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* Doctorante en economía agroalimentaria, Universitat Politècnica de València, España. Profesora, Institución Universitaria Antonio José Camacho, Colombia. Profesora, Universidad del Valle, Cali, Colombia. Autor de correspondencia: andreamosquera@admon.uniajc.edu.co, https://orcid.org/0000-0001-6329-8172.

** Doctor Ingeniero Agrónomo, Universitat Politècnica de València, Catedrático de Economía Agraria, Centro de Investigación en Gestión de Empresas, Universidad Politécnica de Valencia, España. email: emeliam@esp.upv.es, https://orcid.org/0000-0002-0417-2139

*** Doctorante en Ingeniería, Universidad Autónoma de Bucaramanga, Colombia, Observatorio Colombiano de Ciencia y Tecnología, Bogotá, Colombia, email: eromero@ocyt.org.co, https://orcid.org/0000-0002-3627-9942

Enfoques de la gestión, la gobernanza y la estrategia universitarias: revisión bibliográfica sistemática en el siglo XXI

Resumen

La universidad es un actor clave en la creación de conocimiento que debe responder a las transformaciones globales atendiendo a las demandas de diferentes grupos de interés, conllevando a que su gestión se convierta en una actividad compleja. El objetivo de este trabajo es presentar las tendencias en materia de gobernanza, estrategia y gestión universitaria a través de la revisión de las bases de datos Clarivate-Web of Science (WOS) y Scopus con el apoyo del software Vosviewer. Los resultados han permitido identificar tres perspectivas: a) modelos de gobernanza y liderazgo, b) alumnado en la gobernanza universitaria, calidad del servicio y espíritu emprendedor de los estudiantes, y c) tecnología en la enseñanza superior. Por su parte, el Reino Unido destaca como el país con mayor producción científica en este ámbito. Finalmente, el estudio nos permite concluir que los cambios que han experimentado los sistemas de gestión universitaria y la relevancia que han adquirido en ella elementos como las TIC, la relación con la empresa, los procesos de evaluación por pares y la participación de los estudiantes, reflejan los factores más relevantes de la evolución de los sistemas de gobernanza en conexión con las nuevas dinámicas que nos guiarán hacia una universidad emprendedora.

Palabras clave: gobernanza; estrategia; gestión; estudiantes; tecnología.

1. Introduction

The bibliometric perspective in the field of governance, strategy and management in higher education is rare, in fact published works are mainly theoretical or empirical in nature and developed through case studies limited to specific geographical areas such as Asia and Europe (Dobbins & Knill, 2017; Hong, 2018; Huang, 2018; Huang et al, 2020). Thus, many studies approach university governance from a perspective that focuses on changes in the socio-political environment of higher education institutions (hereafter referred to as HEIs) (Ganga-Contreras et al, 2018; Inayatullah & Milojevic, 2016; Nabaho et al, 2020; Schmal & Cabrales, 2018). On the other hand, there are studies related to the impact these changes have on university management and possible improvements in the training of high competence professionals, among others (Ganga-Contreras et al, 2018; Lee, 2015).

In particular, regarding university governance and management there are known case studies of university systems and models by country or region, both

qualitative and quantitative. However, there are few bibliometric studies and the existing ones are mainly in the field of the quantification of research results (Berlemann & Haucap, 2015). This is evidence of a knowledge gap that supports the relevance of research in the field of bibliometrics, as well as a systematic literature review where a large number of publications are analyzed (Bronstein & Reihlen, 2014; Huisman & Tight, 2016; Perna et al, 2020).

This article aims to contribute to alleviating the existing deficit in bibliometric studies and systematic literature reviews in the field of university governance and management, determining the most relevant dimensions and trends in the field in order to provide a reference for future research in this area.

This study provides an additional empirical perspective to research on strategy, management and governance in universities, and may be of use to higher education researchers, policy makers, administrators and managers working in the field of universities and higher education, helping them to improve management, strategic planning and decision-making. In addition, the study reduces the bias generated by other research by using only one of the reference databases (WOS or Scopus) (Bryman, 2007; Perkmann et al, 2013; Kotsemir & Shashnov, 2017). To this end, the following research question has been formulated: What are the perspectives that guide university governance and management?

In order to respond to the previous question a literature review was carried out based on the most relevant scientific techniques of scientific mapping and network analysis. This process was developed by searching the two scientific databases with the highest impact: Clarivate-Web of Science (hereinafter WOS) and Scopus, in order to include the largest number of journals and obtain the largest number of documents on the subject. Subsequently, a bibliometric analysis was carried out in order to identify authors, countries and journals with the highest production in the area. Finally, citation analysis was used to identify the perspectives or currents of research on the subject.

The article is structured in four sections that follow this first introductory section. The second section evaluates the methodology used, which includes the search, selection and processing of articles, the third section presents the findings and their discussion. Finally, the fourth section presents the conclusions as well as the discussion and then closes with limitations and future research.

2. Methodology

The search for articles was carried out in the WOS and Scopus databases, which are the most prestigious and world leaders in citations (Bar-Ilan, 2008; Yang, 2020). The search parameters are listed in table 1.

Table 1
Search criteria

Applied filters	Database	
	Web of Science	Scopus
Search	Title, abstract, author's keywords and more keywords	Title, abstract, keywords
Time restriction	2000-2022 (date of search september 16, 2022)	
Document type	Article, Books, Book Chapters and Conference papers	
Filters applied	Web of Science (WOS) – Clarivate	Scopus
Journal type	Any	
Keyword combination	"university governance" OR "university management" OR "university strategy" OR "college governance" OR "college management" OR "college strategy"	
Total per database	**1675**	**2683**

The tool used for this process was Vosviewer, which is widely used in scientific mapping (Pourkhani et al, 2019; Puck & Filatotchev, 2020; Taiebi Javid et al, 2019; Tani et al, 2018). The search yielded 4358 records from WOS and Scopus, from which 2519 papers were selected based on inclusion and exclusion criteria such as the following: (a) they have a strong connection between them, and (b) they have at least two citations, consistent with the strength of association criterion (van Eck & Waltman, 2010).

For the systematic literature review we worked within the parameters of Bradford's Law (Urbizagastegui, 1999) which establishes the existence of a minimum number of highly significant documents. This oscillates around 2% of the selected articles, resulting in the 50 most relevant. However, this criterion is biased because it excludes new articles so we have included articles which, although they have few citations, are related by the impact level of the journals where the articles have been published, mainly concentrated in Scimago Journal & Country Rank (SJR) corresponding to quartiles 1, 2, 3 and 4 that account for the level of impact of these publications, finally generating an analysis of 80 articles.

3. Preliminar aspects of the bibliometric approach

Citation analysis of documents reveals highly relevant concepts, methods and tools related to a topic (Romero Riaño et al, 2019). Table 2 shows the 20 most cited papers published in the WoS and Scopus databases in relation to university governance, strategy and management during the period 2000 to 2022.

Table 2
Top 20 most cited documents 2000-2022

Title	Authors	Journal	Year	Cites*	Cites**
Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster	Kaplan, A. M. and Haenlein, M.	Business Horizons	2016	349	1019
La evaluación online en la educación superior en tiempos de la COVID-19	García-Peñalvo, et al	Education in the knowledge society	2020	59	797
Competition and strategy in higher education: Managing complexity and uncertainty	Pucciarelli, F. and Kaplan, A.	Business Horizons	2016	198	564
Educación a distancia en tiempos de COVID-19: Análisis desde la perspectiva de los estudiantes universitarios	Pérez-López et al	Revista Iberoamericana de Educación a Distancia	2021	54	264
University technology transfer offices: The search for identity to build legitimacy	O'kane, C. et al	Research Policy	2015	120	234
Precise orbit determination for quad-constellation satellites at Wuhan University: strategy, result validation, and comparison	Guo, J. et al	Journal of Geodesy	2016	191	225
University–industry cooperation: Researchers' motivations and interaction channels	Franco, M. and Haase, H.	Journal of Engineering and Technology Management	2015	108	216
The Civic University: The Policy and Leadership Challenges (book)	Goddard, J. et al	Edward Elgar Publishing	2016	64	178
Articulating the 'three-missions' in Spanish universities	Sánchez-Barrioluengo, M.	Research Policy	2014	83	172
Antecedents of continued usage intentions of web-based learning management system in Tanzania	Iwoga, E.T. and Komba, M.	Education + Training	2015	79	153
Can critical management studies ever be 'practical'? A case study in engaged scholarship	King, D. and Learmonth, M.	Human Relations	2015	72	139
Stakeholder collaboration in entrepreneurship education: an analysis of the entrepreneurial ecosystems of European higher educational institutions	Bischoff, K. et al	The Journal of Technology Transfer	2018	68	136
Structural changes in the Polish higher education system (1990–2010): a synthetic view	Kwiek, M.	European Journal of Higher Education	2014	54	133
Always connected, but are smart mobile users getting more security savvy? A survey of smart mobile device users	Imgraben, J. et al	Behavior & Information Technology	2014	83	130
Transformation of university governance through internationalization: challenges for top universities and government policies in Japan	Yonezawa, A. and Shimmi, Y.	Higher Education	2015	51	123
Sustainability in the Higher Education System: An Opportunity to Improve Quality and Image	Salvioni et al	Sustainability	2017	68	122
An extension of Delone and McLean IS success model with self-efficacy: Online learning usage in Yemen	Aldholay, O.I. et al	International Journal of Information and Learning Technology	2018	56	116
Reputational Risk, Academic Freedom and Research Ethics Review	Hedgecoe, A.	Sociology	2016	50	106
Determining students' behavioural intention to use animation and storytelling applying the UTAUT model: The moderating roles of gender and experience level	Suki N.M and Suki N.M.	The International Journal of Management Education	2017	53	103
Mapping the quality assurance of teaching and learning in higher education: the emergence of a specialty?	Steinhard, I. et al	Higher Education	2017	47	98

*citations according to processing in Vosviewer from Scopus and WOS databases
**citations according to Google Scholar records

Of this group, only three papers were published by single authors, the rest are multi-authored papers. On the other hand, the most cited documents were generated by two or more authors, among which, due to their number of citations in Google Scholar, are found the studies of García-Peñalvo et al. (2020), Kaplan & Haenlein, (2016) y Pucciarelli & Kaplan (2016) the urgent transformation of the face-to-face classes to an online format has been carried out in a way that can be described as generally acceptable, being aware that the measures taken have been due to the urgency and not to a priori planning to teach a subject entirely with an online methodology.

However, having to face an online evaluation is something that the face-to-face universities, and most of the distances or online universities, had never faced from an institutional perspective. The teaching staff and students, therefore, have to give a response that integrates methodological and technological decisions, while ensuring equity, legal certainty and transparency for all actors, internal and external.

The Group of Online Teaching Managers of the Public Universities of Castilla y León has prepared a guide with recommendations to help teachers and universities in this process. The essence of this guide is presented in this article to make these recommendations available to a higher number of teachers who share this problem at this time worldwide.",”container-title”:”Education in the Knowledge Society (EKS. The process was realized through Google Scholar, as it consolidates the total citations (largest number of databases) per article.

The most representative countries in terms of number of citations are the United Kingdom with 1111 citations and 266 documents. In second place is France with 753 citations and 23 documents, a notable case in terms of the ratio of citations to the number of documents; in third place is Australia (707 citations and 181 documents); In fourth place is the United States (653 citations and 206 documents), in fifth place is Germany (594 citations and 72 documents), in sixth place is Spain (143 documents and 582 citations), followed by Malaysia (118 and 504 citations), China (236 documents and 482 citations), and finally, in tenth place is Ireland with 21 documents and 298 citations.

Co-authorship analysis is a highly relevant indicator of research collaboration, with several empirical studies showing that the diversity and size of collaborative networks have a positive effect on the generation and dissemination of knowledge (Sanz Casado, 2000; Schultz-Jones, 2009). In this area, co-authorship networks of authors are considered a good representation of the social network of academics (Romero Riaño et al, 2019).

On the other hand, among the authors with the most co-authored papers in WOS and Scopus are: Mok (15), Ganga-Contreras (13), Shattock (10), and De Boer H. (7), Liu X. (7), Hill, R. (7) Abdullani, M.S. (7) and Li (7).

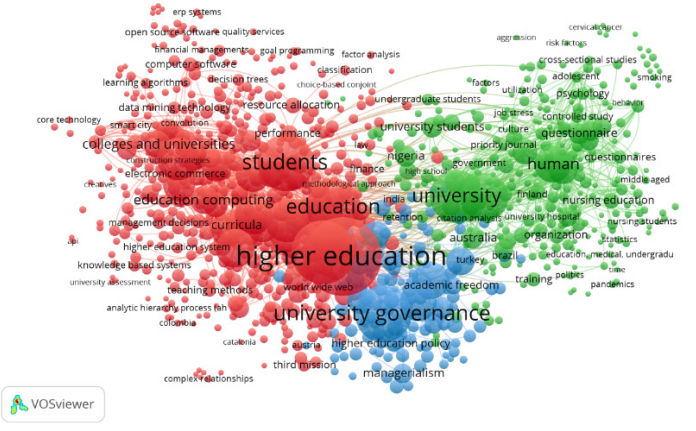
The most representative scientific journals in relation to university management, governance and strategy (by number of publications) are mainly British (Studies in Higher Education, Higher Education, Tertiary Education and Management, Journal of Higher Education Policy and Management, among others), although there are also US-based journals in the collective (Library Philosophy and Practice and ACM International Conference

Proceeding Series), Germany (Advances in intelligent systems and computing) and Russia (Vysshee Obrazovanie V Rossii), and in the case of Latin America there is Venezuela (Venezuelan Journal of Management).

4. Perspectives of the scientific production

In relation to the network analysis co-occurrence of terms, from the clustering results, three perspectives on university governance, strategy and management were identified, each identified with a different colour: 1) university management and governance systems (blue), 2) student governance, service quality and student entrepreneurship (green), and 3) emerging technologies in higher education (red), which are described below (diagram 1).

Diagram 1
Perspectives on university strategy and management



4.1. University management and governance systems perspective

One of the most analyzed elements in the field of university systems is governance, with regard to which three models are recognized (Clark, 1991; Dobbins & Knill, 2017) rooted mainly in Europe, although other classifications exist (Brunner, 2010; Liu & Cheng, 2005): academic self-governance (Gieysztor, 1992; Olsen, 2007), which is based on the German model, the state-centered model (Cohen & Sapir, 2016; Neave, 2001) and the market-oriented model (Alexander & Manolchev, 2020; Mok & Jiang, 2020) or entrepreneurial university (Bronstein & Reihlen, 2014).

In the first instance, academic self-governance is based in the German Humboldtian perspective (Brunner, 2010; Frølich et al, 2010), as well as an inseparable link between teaching

and research. In this model there is an academic oligarchy, which can lead to weak university management, as well as strong academic self-regulation by the teaching staff, mainly in terms of academic training and research, the latter being a determining factor in competitiveness (Brunner, 2010). In turn, universities are highly dependent on the state, limiting their scope for strategic investments, although there is a certain level of autonomy and freedom in the management of expenditure and the allocation of funds (Dobbins & Knill, 2017).

The differential element of the state-centered model is the control of the university by the state, and the majority of its activities are financed by government funds (Boer & Maassen, 2020; De Silva Lokuwaduge & Armstrong, 2015; Schulze-Cleven & Olson, 2017). This differs from the academic self-governance scheme in that management is more centralized than in the scheme offered by the Humboldtian perspective (Brunner, 2010).

Finally, in the framework of the market-oriented model and the entrepreneurial university the literature shows different reforms associated with the commodification of higher education, focusing on the economic utility of teaching and research, turning IES into market-driven quasi-businesses (Bleiklie & Kogan, 2007; Carnegie & Tuck, 2010; Deem, 2004; Dobbins & Knill, 2017; Ornston & Schulze-Cleven, 2015; Pucciarelli & Kaplan, 2016; Schulze-Cleven & Olson, 2017). These entities face three central challenges: the need to improve their reputation and market share; to adopt an entrepreneurial mindset; and finally, to broaden interactions and value co-creation with stakeholders (Pucciarelli & Kaplan, 2016).

As a result of the entrepreneurial university, products such as patents and spin-offs are created mainly from the research and teaching functions, thus they are an example of knowledge and technology transfer that has an impact on scientific and academic development with an important contribution to the environment (Audretsch & Belitski, 2019; Fryges & Wright, 2014; Hossinger et al, 2020; Mathisen & Rasmussen, 2019).

In addition, the concept of new public management (NGP) has emerged in this model, which has led to different higher education systems (Byun, 2008) and is modelled on the style of the private sphere to be implemented in organizations providing public services. Among the risks it may lead to a reduction of the possibilities for the creation and generation of frontier knowledge, as well as having a negative impact on the academic quality of IES if it is purely efficiency-oriented (Christensen, 2011; Kwiek, 2014; Shattock, 2013).

Building world-class universities requires not only strong financial investment but also a transformation of university governance towards a global context (Peters & Besley, 2018; Shummi & Yonezawa, 2015), here the cohesion of the university-business binomial and academic and university entrepreneurship, which is based on the development of business-academic ecosystems, are included as relevant elements (Link & Siegel, 2007; Yi & Uyarra, 2018), generators of knowledge-based solutions to create value in organizations and in society (H. N. Parker, 2011; Schmal & Cabrales, 2018).

Thus, the three models identified have differential elements. However, they converge in the fact that the processes of accreditation and peer evaluation that

form part of the governance systems described in the study constitute the guarantors and guardians of academic excellence as a priority element, as far as the qualification of teachers is concerned (Sayidah et al, 2019), in the research, teaching and knowledge transfer functions.

4.2. Students in university governance, service quality and student entrepreneurship perspective

In the first instance, the contribution of students to university governance has been a relatively underexplored area of research both theoretically and empirically (Carey, 2018; Lizzio & Wilson, 2009). It is argued that universities should adopt a more proactive approach to the development and support of student representatives in their role as leaders (Johnson & Deem, 2003).

The works of Luescher-Mamashela & Mugume (2014) y Rochford (2014) analyze different contexts to describe the factors for and against student representation. The role of students and their link to decision-making bodies has been marked by a complex history, evolving into the view of the student as a client of the university (Naylor et al, 2021), the new generation is responding to increasingly strong demands from the context and society, leading it to become actively involved. At the same time, it has led to the emergence of complex behaviors (Omodan, 2020), which can lead to the identification of the student organization as an unruly and potentially non-conformist element, which can reduce the student's employability in their professional future, although at the same time this experience is recognized as an essential element in their training process (Rochford, 2014).

Student participation in university governance has acquired greater impact in decision-making bodies, mainly in spheres that are decisive for improving academic quality and its adaptation to current trends, where technology plays a predominant role in the development of students and future graduates (Planas et al, 2013).

On the other hand, the increasingly active participation of students and their greater commitment to civil society constitutes a mobilizing and change-generating space with repercussions that go beyond student government, as it has implied their arrival in local and national public administrations and constitutes an additional field of professional performance (Luescher-Mamashela & Mugume, 2014; Omodan, 2020; Raaper, 2020).

A second element that has aroused the interest of the researchers, linked to the students, is related to their perception of the quality of the service (Khan et al, 2018; Ramsay et al, 2007; Torabi & Bélanger, 2021). In this area there are learner-oriented models, where satisfaction indicators determine the adaptation of processes and activities (Wayessa et al, 2022). Following these lines there are approaches such as CRM (customer relationship management) which promotes strategies for student retention (Hrnjic, 2016; Yudong et al, 2020), and takes into consideration the impact of academic life on the physical and mental health of students with a preventive approach to academic underperformance and dropping out (Naylor et al, 2018; Wossen, 2021).

The growing university-business connection has turned entrepreneurship training into a key element of

universities, requiring a gearing-up that allows the development of the student's entrepreneurial intention (Mykolenko et al, 2022) and the creation of start-ups (Pérez-Macías et al, 2021).

4.3. Technologies for teaching and learning in higher education perspective

The relationship between university competitiveness and the development and application of smart educational innovations is increasingly accepted in the literature. (Ponelis & Adoma, 2018; Yordanova & Stoimenova, 2021), as it has become a determining factor in the positioning of universities and has opened up space for the virtual university (Pursula et al, 2005).

In addition, networks in distance education and e-learning have become a key element in the reach and visibility of universities. Kaplan & Haenlein (2016) point out that the university, thanks to these technologies, becomes a place for socializing and building professional networks, which in turn strengthen personal and professional growth and development.

The orientation towards teaching-learning models that include the use of technology is growing, since the phenomenon has been strongly consolidated with the Covid-19 pandemic which forced institutions, professors, students and in general the entire university community to adopt strategies focused on the use of technology for teaching (Adzovie & Jibril, 2022). This experience favored the consolidation of hybrid models of education, which have become institutionalized in IES (Sahito et al, 2022).

While technology contributes in different components to academic quality, it is also necessary to recognize the negative effects of its excessive use, as is sometimes the case with smartphones (Ammunje et al, 2022). It is key to seize the opportunity and innovate in the development of virtual learning environments which interact with practical learning modalities, even with the difficulties of implementation that are recognized in the literature, marked by the context, the specific characteristics of HEIs, the type of technology, the type of learning environment, the type of technology used (Aldholay et al, 2019; Aslam et al, 2022; Lwoga & Komba, 2015), and even the gender (Arena et al, 2022). Governments are called upon to assume a central role in building this minimum infrastructure with a view to implementing career-long education, ensuring the continuity of a system of training and adaptation of the workforce and the adult population (Markova et al, 2017).

Finally, these elements are what give strength to the concept of the smart university, which is based on the creative use of technologies in the different university spaces, also generating an impact on the students' perception of the quality of the institution and its management model (Jadrić et al, 2021). This includes the relationship with industry (Uddin Ahmed et al, 2021), which is consolidated through technologies that support administrative processes and seek to provide a better service, efficiency in the use of resources and contribute to academic processes for the improvement of the institutional reputation (Isingoma-Wakaisuka et al, 2020; Ponelis & Adoma, 2018).

4.4. Trends in university governance, strategy and management: Discussion

Considering the three perspectives identified: (1) management systems and university governance, (2) student participation in university governance and (3) emerging technologies in higher education, several key elements stand out:

In a comprehensive manner, the analysis of the three university models has allowed us to visualize the evolution of the university in some countries with a growing commercial vision, towards a model of NGP that adopts the forms and practices of private enterprise with the aim of achieving efficiency and effectiveness in academic and administrative processes that is consolidated with results associated with the mission processes of teaching, research and transfer with spin-offs and start-ups.

Beyond the eternal rivalry between academics and administrators in the higher education sector, the NGP argues that strong administrative and faculty leadership can coexist with outcomes that favor different stakeholders (faculty, students, administrators, staff, industry, state and society) (Bleiklie & Lange, 2010; Lapworth, 2004).

However, other research highlights the fact that NPM can also lead to conflicting positions that pit academic autonomy against managerial efficiency (Cannizzo, 2018). In response, strategies and tools are being developed to reduce the adverse effects of the marketization and corporatization of universities (Argento & Van Helden, 2021; Deering & Sá, 2018; Long, 2010; Parker, 2022).

The key point that enshrines the relevance of faculty in the university system is the mechanisms of peer or external review, where the three models of university governance and management converge, reinforcing and legitimizing scientific performance (Núñez & Leiva, 2018) and the selective allocation of resources, forcing HEIs to adjust their policies and decision-making in this respect. Their impact is expected to continue to grow due to the competitive pressure on IES in the market (Boer et al, 2007).

As a result, on the other hand there have been changes in the internal distribution of power within the academic profession, as well as within universities, reinforcing the academic elite which has been empowered and which in turn sets the rules according to which academic activities are rewarded and funded (Rowlands, 2013). Secondly, they strengthen those who receive positive evaluations as this gives them a stronger bargaining position with their university management (Sivak & Yudkevich, 2017).

Even in countries where, although the positioning and academic quality of the public university is highlighted in comparison to the private university model, it is evident that the academic culture is adapting to the idea of competitiveness in the global academic market (Rowlands, 2013; Sivak & Yudkevich, 2017).

One of the phenomena that is presented as a determinant of the quality of HEIs is the degree of student dropout, although it is pointed out that this problem goes beyond the academic program or the institution itself, depending more on the processes of basic and secondary education, the pedagogical model, or socio-cultural change, among other aspects (Prestes & Fialho, 2018).

Student participation in university governance is increasing, leading to

the development of leadership skills and competences, which subsequently evolve into participation in civil society.

In addition, in recent years the university has promoted entrepreneurship with direct and transversal subjects and processes (Ekpe & Mat, 2016; Mykolenko et al, 2022) this has had an impact on the growth of such projects among students. At the same time, much progress has been made in supporting the development of start-ups (Zaini et al, 2015) which shows the impact of these projects.

As one aspect of the development of entrepreneurship it is essential to analyze the determinants of entrepreneurial intention among students, such as the curriculum, the context, the parental model that encourages entrepreneurship and even their gender (Moreno-Gómez et al, 2019; Pérez-Macías et al, 2020). While this is a clear trend, more needs to be done to connect academic developments with the promotion of leadership and entrepreneurship.

Finally, another element that has proven to be key in the development of processes in IES are the ICTs, both in teaching-learning and in the management sphere, since they represent a challenge in the face of the consolidation of the smart university concept, which implies the deployment of efforts both in the mission functions and in university strategy, management and governance (Jadrić et al, 2021).

5. Conclusions

The bibliometric analysis and systematic literature review have highlighted three perspectives in the field of university management, governance and strategy: academic self-governance, the state-centered model and the market-oriented or entrepreneurial university model.

A growing commercial focus in the NGP of IES, as well as support for entrepreneurship and business creation processes of both professors and students, stand out as key elements. The NGP provides IES with greater instruments that enable greater efficiencies, as IES must ultimately be evaluated by academic peers as part of the quality and academic excellence processes linked to the governance models outlined above. The results generated from the work of professors and researchers are fundamental, an aspect which recognizes the relevance of the academic body in obtaining quality standards and which in turn have an impact on positioning and reputation.

On the other hand, students, their performance and representation in university decision-making bodies are a critical element in IES decision-making. In addition, their comprehensive attention allows for the identification of lines of action to solve specific problems, as well as to generate innovative and disruptive processes that not only allow for updating strategy, but also to consider the students' opinions on issues such as academic offerings, pedagogical models curricula, among others.

The insertion of technology in higher education has marked a break in the educational and pedagogical model, a situation that has deepened since the crisis caused by COVID-19, allowing progress in the construction of the so-called smart university with the aim of articulating the technological world in a context of academic excellence, which generates new knowledge in response to the needs and priorities of society, in conjunction with industry and the State, thus completing the strategy for the

university-business-State-society actors.

Like other research, the literature review presented in this article has its limitations. In the first instance, the initial search was conducted in the WoS and Scopus databases. As a natural consequence of this situation, research that is not included in these databases is outside the scope of the current study. Secondly, the search equation used the terms "university strategy" OR "college strategy" OR "university management" which could imply certain limitations, as it could be excluding keywords related to university management. For future research, it is suggested that a meta-analysis of this field be carried out, as well as a more in-depth analysis of the proposed perspectives.

Finally, the paper may be excluding documents that have used the concept of higher education as a reference that could include elements that were not taken into account in the analysis and have been envisaged as a next step in the research.

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